Cape Breton University Laboratory Safety Procedures

A. Laboratory Safety Procedures – School of Science & Technology

All students will participate in a general laboratory safety lecture at the commencement of their laboratory work. Students will be required to read and sign the <u>Student Declaration on Laboratory Safety</u> (see Appendix "A") before commencing with laboratory work. The general laboratory safety lecture will include (but is not restricted to) the following safety rules:

- 1. Do not bring unauthorized persons in to the lab without the express permission of the instructor or faculty member.
- 2. The use of audio devices (such as Ipods, MP3 players, or radios) may interfere with hearing important safety information and their use is therefore prohibited while in the lab.
- 3. Work in the laboratory only as authorized by your instructor. Do not perform unauthorized experiments. No hazardous or other materials are to be removed from the laboratory without the express permission of the instructor or faculty member.
- 4. Carefully read all instructions and thoroughly plan your work.
- 5. Learn emergency procedures and know the locations of the nearest eye wash, safety shower, fire blanket, fire extinguisher and chemical cleanup materials.
- 6. If you are injured or if any type of accident or fire occurs, **IMMEDIATELY** call your instructor for assistance.
- 7. Follow all procedures with respect to laboratory safety, which includes handling or storage of chemicals, flammable and combustible liquids, handling of laboratory waste or transporting hazardous materials.
- 8. Wear appropriate clothing and closed-toed shoes (not sandals). Wear clothing that reduces the exposure of bare skin. Restrict loose clothing (e.g. long sleeves). Confine long hair.

<u>Faculty/Lab Instructors reserve the right to exclude improperly dressed students from entering a lab.</u>

In addition, when working with chemicals:

- 9. When directed by your professor or lab instructor, students are required to wear lab coats for protection and to lower the risk of contamination to the outside.
- 10. When using protective gloves, dispose of them properly. Do not wear gloves outside the lab as they can pose a contamination risk to others.

- 11. When indicated, students must wear approved safety goggles/glasses during laboratory sessions. Regular glasses are not safety glasses and therefore goggles must be worn over regular glasses or safety side shields must be attached.
- 12. Do not wear contact lenses in a laboratory. A chemical splashed into the eye will be trapped against the cornea by the contact lens increasing the likelihood of eye damage. Some chemicals are absorbed by some contact lenses and can cause severe eye irritation or injury.
- 13. Carefully read all labels on chemical bottles. Never return excess chemicals to the stock bottles.
- 14. Do not eat, drink or smoke in the lab. Never taste chemicals. Smell chemicals cautiously by wafting the vapors toward you.
- 15. When mixing or heating chemicals in a test tube, point the test tube away from people.
- 16. Do not use Bunsen burners or other sources of spark or flame in the vicinity of flammable liquids. Note that most organic solvents are flammable.
- 17. While mixing acid and water, always add the acid to the water, not vice-versa.
- 18. Fill a pipet by using a pipette bulb or mechanical pipettor only; **never** pipette by mouth.
- 19. If a spill occurs, refer it to your instructor or other trained person immediately.
- 20. Dispose of chemicals as directed by your instructor and in a manner consistent with local hazardous waste disposal regulations. Organic solvents are **never** to be disposed of down the sink; receptacles will be provided as needed for their collection.
- 21. Always wash hands when you leave the lab, and before you eat after leaving the lab.

Independent Research or Working Alone in the Lab

It is not permitted for students to work alone in the lab, except as described below.

Students enrolled in independent research or thesis courses must work during regular hours, unless otherwise approved. If work is to be done outside of regular hours, permission of the faculty or instructor is required. Where there is risk to chemical exposure, arrangements must be in place to ensure that a supervisor or fellow student is nearby and able to check on your safety on a frequent basis.

B. Obtaining a Risk Assessment for Students with Medical Conditions or Pregnancy

The University encourages students with any medical condition, contemplating pregnancy or who are pregnant to contact the Safety Officer for a risk assessment. Each of the Biology and Chemistry Departments will designate a staff member who will be identified to all laboratory students at the beginning of each term or academic year. Students may contact this departmental representative to disclose a medical condition or pregnancy, in which case the departmental representative shall communicate this information to the safety officer, who shall implement the risk assessment process with the student.

All staff and faculty members involved in this process will respect the confidentiality of the student's information ensuring that information will be provided to instructors or faculty members on a need-to-know basis.

Safety Officer and the Risk Assessment

The Safety Officer when made aware of a student medical condition or pregnancy will work with the student to ensure that they receive information about chemicals and/or materials in laboratories which may affect their health or the health of the embryo/fetus. This may include such information as:

- MSDS information sheets on chemicals
- Lab Safety procedures
- Information on teratogens, radiation and other chemical or physical agents used in laboratories
- Information on respiratory protection, gloves, or other safety devices
- How to obtain academic or counseling support, as may be needed or identified by the student
- Other sources of information including experts in particular fields, or sources such as MotherRisk.

It is not the role of the safety officer to give advice to the student but rather to provide information to the student which will enable the student to fully discuss the risks with their medical practitioner.

C. Students Proceeding with Labs Despite Known Risks

In the event that the student with a medical condition or who may become pregnant or who is pregnant is intent on proceeding with Labs, the student will be referred to the Dean who will insure that the student consults with a medical practitioner before proceeding with providing informed consent and a release to the University and School.

The Dean will ensure that students exercising their option to continue lab work will only be permitted to commence or continue with laboratory work after completing the following steps:

- 1. Consulted with the Safety Officer to review the potential risks to become informed of the risks associated with the chemicals in the particular lab or labs;
- 2. Obtained MSDS sheets on chemicals for the particular lab or labs;
- 3. Consulted with their medical practitioner who will confirm that the student has informed them of the caution on laboratories, and MSDS forms;
- 4. Completed and signed the "Acknowledgement of Risks and Release Agreement for Students with Medical Conditions or who Are Pregnant" (see Appendix B) which will include confirmation that the student has consulted with a medical practitioner.

The Dean retains final authority to authorize registration or continuation in any lab following completion of the above steps.

Appendix "A" – Student Declaration on Laboratory Safety

Name	Semester	20	
Course:			
Safety in Laboratory Courses			
To the student: You are required to read, und indicated in your laboratory manual or labor indicates your commitment to abide by these	ratory handouts. Your sign		
I have read carefully and understand all of the read all rules for specific exercises contained required for this course. I recognize that it is recognized.	in the laboratory manual or	r laboratory handouts	
I realize that all chemicals are potentially dang them. If I am unsure of the potential hazards of instructor prior to using the chemical in questi	of any chemical, I will disc		
I understand that I am required to wear safety to do so in the laboratory. I also understand the of contact lenses in laboratory situations where volatile organics are in use. I am aware that every CBU does not permit wearing of contact lense	at there are dangers involve reactive chemical agents, wen when safety goggles or	ed in wearing all types , biological fixatives, or	
If I am pregnant or have a medical condition soldiabetes, epilepsy, heart ailments, or any other of consciousness or impair my ability to safely accommodation, I am aware that the university condition at the beginning of the semester, or medical condition and follow all safety proceed practitioner.	r medical condition which y handle chemicals or which y encourages me to inform as soon as I am aware of the	may cause sudden loss ch may require my instructor of my ne existence of the	
I further understand that I am permitted to work in the Laboratory only when it is under the supervision of a laboratory instructor, unless specifically informed otherwise.			
Sign both copies of this form. Retain one copy supervisor will collect and retain the other sig	, ,	ook. Your laboratory	
Signature	Course Number		
Date Laboratory Room Number	er		
Lab Instructor Name (print)			

Appendix "A" – Student Declaration on Laboratory Safety (Student Copy)

Name	Semester	20
Course:		
Safety in Laboratory Courses		
To the student: You are required to read, indicated in your laboratory manual or laboratory manual or laborates your commitment to abide by the	boratory handouts. Your signo	0 2 2
I have read carefully and understand all of read all rules for specific exercises contained required for this course. I recognize that it is	ed in the laboratory manual or	laboratory handouts
I realize that all chemicals are potentially dethem. If I am unsure of the potential hazard instructor prior to using the chemical in que	ls of any chemical, I will discu	
I understand that I am required to wear safe to do so in the laboratory. I also understand of contact lenses in laboratory situations while volatile organics are in use. I am aware that CBU does not permit wearing of contact le	I that there are dangers involve here reactive chemical agents, t even when safety goggles or	ed in wearing all types biological fixatives, or
If I am pregnant or have a medical condition diabetes, epilepsy, heart ailments, or any of of consciousness or impair my ability to sat accommodation, I am aware that the univer- condition at the beginning of the semester, medical condition and follow all safety pro- practitioner.	ther medical condition which needs the handle chemicals or which resity encourages me to inform to as soon as I am aware of the	nay cause sudden loss n may require my instructor of my e existence of the
I further understand that I am permitted to supervision of a laboratory instructor, unless		
Sign both copies of this form. Retain one consupervisor will collect and retain the other		ok. Your laboratory
Signature	Course Number	
Date Laboratory Room Num	nber	
Lab Instructor Name (print)		

Appendix "B"

Informed Consent: Acknowledgement of Risks and Release Agreement for Students with a Medical Condition or Who Are Pregnant

To the student: Please read this entire document carefully before signing.

Witnessed by the Dean:	
· · · · · · · · · · · · · · · · · · ·	coluntarily sign this document and acknowledge that it my minor children and other family members, and my tate.
I agree to release and hold free and clear Technology, and its faculty, instructors a expenses (collectively referred to as "cla actions or inactions of any faculty, instruthe School of Science and Technology arclaims I may have against Cape Breton U	Cape Breton University and the School of Science and and staff in regard to all claims, liabilities, suits or times"), including any claims alleged to be caused by the actors or staff related with Cape Breton University and rising from my participation in lab. I agree to waive all University and the School of Science and Technology, ag on my behalf, will make a claim or file a lawsuit School of Science and Technology.
RELEASE	
Medical Practitioner, Address	
assume and accept full responsibility for known and unknown), and for any injury from these risks. I confirm that I have come with respect to the risks of continuing	e of the risks associated with this laboratory(ies) and the inherent and other risks with this laboratory (both y, damage, death or other loss suffered by me, resulting onsulted with a medical practitioner, who has advised g with my lab activities and that my having my medical ging that I will follow all safety procedures as prescribed
I also confirm that I have received and reabove lab, and have consulted with a med	eviewed MSDS sheets on chemicals associated with the dical practitioner to review the hazards.
pose additional risk to me or the embryo effects may include embryolethality (dec	osure to chemicals, physical and biological agents may oldeveloping fetus. I further understand that these ath of the fertilized egg, the embryo or the fetus), normal growth and/or postnatal function deficits.
•	ety Officer who has informed me of the risks associated and who has recommended I do not enroll (or regnancy.

Cape Breton University Laboratory Safety Procedures Approved by SST, May 7th, 2009